Engineering has reviewed the plans for the Oleander Storage II project submitted February 23, 2016 and have the following comments:

Stormwater Management Permit Application Form

1. III. Contact Information (2) – Please complete Signing Official & Title.
2. IV. Project Information (12) – Please complete the Total Offsite Newly Constructed Impervious Area section. There is some impervious being constructed within the Oleander Drive right-of-way that needs to be accounted for (asphalt, driveway, sidewalk, etc.).
3. IV. Project Information (13) – This number will change once #12 is completed.

Supplements

4. Energy dissipaters are listed as a pretreatment device in the supplements. Energy dissipaters are used to accommodate a concentrated influent flow, but are not considered a pretreatment device. Please incorporate pretreatment in your design per Chapter 16 Infiltration Devices in the NCEQ Stormwater BMP Manual.

Infiltration Basin Operation and Maintenance Agreement

5. Note Only – No changes required, but for future reference only one O&M Agreement form is needed to cover multiple infiltration basins.

Stormwater & Erosion Control Narrative & Calculations

6. Since the infiltration basins will be used as a sediment and erosion control devices, please make sure all the relevant information provided in section 16.3.1 Converting Sediment and Erosion Control Devices of the NCEQ Stormwater BMP Manual is reflected in the Sequence of Construction in the calculations and the notes on sheet C-5 of the construction plans.
7. Please include culvert design calculations for the proposed 72" culvert crossing the stream.
8. Please provide the New York DOT Dissipater Method Worksheet for each energy dissipater.
9. Please add title to energy dissipater calculations sheet for the flared end sections to show they are sized for the 10-year storm event and not the 25-year storm event as the flumes are.
10. FES #4 shows a flow of 4.89 cfs and references "(Hydraflow Report Storm 23-1)". Should that read "(See Storm Calcs)" as FES-1 does above it?
11. Please provide composite curve number calculations. I see the composite number formula in the Hydrograph Reports, but I need to see ow those numbers were derived.
12. Storm Sewer Tabulation (Project File: 2016-02-14 STORM 3-1.stm), inverts listed in this model do not match the inverts on the plans. Please revise for all design storm events.
13. Storm Sewer Tabulation (Project File: 2016-02-14 STORM 9-14.stm), line 3 pipe size (15") and system inverts listed in this model do not match the pipe size (18") and inverts on the plans. Please revise for all design storm events.
14. Flume Post-Developed Flows – 2, 10 and 25-year Peak Flows are listed as Pre-developed. Please clarify.
15. Same comment in #14 applies to peak flows for swales.
16. Hydraulic Analysis Reports for swales – please add in the notes section under the Channel Analysis for the swale that these are Q25 channel analyses.

17. Please provide documentation/calculations that show how the requirements of section 16.3.9 in the NCEQ Stormwater BMP Manual are being met.
18. Please submit to Engineering any permits required for construction of stream crossing.
19. Please submit infiltration basin calculations analyzing the 50-year storm per the TSSM.
20. An emergency outlet or overflow device for the 50-year storm for the infiltration basins shall be provided per the TSSM.

Plans

21. Please include an overall drainage area map for the infiltration basins. It is difficult to determine the overall drainage area using the inlet drainage area map provided.
22. Sidewalk will be required along the Oleander Drive property frontage. Please add to plans and account for the sidewalk in the SWMP application.
23. Please label the flumes on the plans.
24. Please provide more detailed grading for the proposed swales on the plans (spot elevations, contours, slopes, etc.) to ensure positive drainage.
25. Spot elevations on sheet C-5 are difficult to read at current size. Please enlarge or change format. Also, elevations needed along curb near Building 6 and along curb along west side of stream crossing.
26. It is not clear what type of structure #11 thru #16 will be. Will these be cleanouts or inlets? Please specify on plans. Add details if necessary.
27. Label flared end sections and add details.
28. Commercial driveway will be required at the connection to Oleander. Please revise site and add detail to the plans. See Technical Standards and Specifications Manual.
29. Is dumpster area large enough? Please dimension and show limits of concrete pad.
30. Please remove text “ex. wetland to be filled” from sheet C-3.
31. Pull proposed sidewalk out of 50’ stream buffer on sheet C-3.
32. 49’ dimension on sheet C-3 for Building 2 means building is in 50’ stream buffer. Please revise dimension or pull building out of buffer.
33. Specify headwalls for culvert at stream crossing. Add details to plans.
34. Infiltration Basins #2 and #3 – allowable side slopes are 3:1…side slopes for these basins scale at 2.5:1. Please revise.
35. Show on plans that existing curb & gutter along Oleander Drive to be removed for installation of proposed driveway.

Please submit one complete set of plans, the revised narrative, application, calculations and any other supporting documentation to Engineering for additional review. Please call or email if there are any questions. Thank you.